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Effectiveness of a telephone prevention programme on the recurrence of suicidal behaviour. One-year follow-up

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ABSTRACT

People who have attempted suicide are considered a risk population for repeating the behaviour. Therapeutic interventions, such as telephone follow-up programmes (TFPs), are promising but more evidence for its efficacy is needed.

In this multicentre, open, ex-post-facto, pre/post, one year prospective study, a previous cohort discharged from the emergency department for a suicide attempt (SA) and given routine treatment (n=207) was compared with a similar group who received the same intervention plus a structured TFP of six calls (n=203). At one year of follow-up, the efficacy of the TFP at preventing SA was assessed. A total of 53.2% (n=108) of the patients finished the TFP. A total of 20.3% (n=42) of the routine treatment group and 23.6% (n=48) of the TFP group re-attempted at least once in the follow-up period (χ^2=0.7;df=1;p=.412). However, in both groups, different subsamples of patients who presented extreme risk of SA at follow-up (0-57%) were identified. In the TFP group, the recurrence of suicidal behaviour was lower in patients admitted after the index attempt and in those who had more severe psychopathological symptoms, but not in the other profiles. Thus, this study has identified a specific profile of patients who could benefit from a brief-contact intervention.

1. Introduction

Suicide attempts (SAs) constitute a public health problem of great importance and account for 10 to 20% of all psychiatric emergences seen (Jiménez-Treviño et al., 2015). In Spain, 174.4 attempts per 100,000 inhabitants has been estimated (Blasco-Fontecilla et al., 2019). This high prevalence is due in part to the high repetition rate. SA is one of the main predictors for the repetition of suicidal behaviour in the short and medium term (Larkin et al., 2014) and for death by suicide (Hawton et al., 2003). In fact, upon discharge from the emergency department after SA, the risk of suicide increases significantly (Wang et al., 2019). Therefore, the care of people who have attempted suicide is one of the main prevention strategies that should be implemented (Zalsman et al., 2016).

Since 1980, different support strategies have been put into place for these patients, focussing on non-intensive follow-up and brief-contact programmes since they are generally well accepted, easily protocolizable, and can reach a large population. The clinical trial pioneered by Motto stands out (Motto and Bostrom, 2001). He followed up SA patients by sending them postcards four times a year for five years. The group that was contacted had a lower suicide rate than the group that was not contacted. Recently, the American initiative Zero Suicide was deemed a key factor in preventing the recurrence of suicidal behaviour by minimizing the disconnect between different levels of care, ensuring therapeutic continuity, and monitoring people at risk (Labouliere et al., 2018). In addition, a recent meta-analysis concluded that active contact and follow-up reduce the repetition of suicidal behaviour in the 6 months after discharge from the emergency department (Inagaki et al., 2019).

It seems that the most evaluated intervention has been telephone follow-up programmes (TFPs) as a therapeutic strategy consisting of brief and structured contacts over 6-12 months. Some studies have shown promising results in the reduction of re-attempts (Cebrià et al., 2013; Exbrayat et al., 2017; Fleischmann et al., 2008; Miller et al., 2017; Milner et al., 2015), while others are inconclusive (Bertolote et al., 2010; Mousavi et al., 2014) or limited in scope (Vaiva et al., 2006). Therefore, despite being a well-accepted and low-cost strategy for SA patients, the current state of knowledge has many gaps in terms of the ideal duration of follow-up, the structure of the brief contact (only telephone,

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telephone combined with another type of contact, number and frequency of calls), the specific training of the people who make the calls, the content of the calls, patient adherence to the programme, the convenience or not of participating in it, and what factors are the most effective (Turecki et al., 2019).

On the other hand, people who attempt suicide are not a homogeneous group. Therefore, there may be different profiles of patients with different care needs to avoid new suicide attempts (Exbrayat et al., 2017). It is necessary to identify the profiles of patients who benefit from one or other interventions (Messiah et al., 2019; Turecki et al., 2019).

On the above background, the specific contribution of this study is to assess the effects of a TFP combined with routine treatment on the repetition of suicidal behaviour in a sample of patients who were treated for SA in the emergency department and were followed for a year. This group was compared with a previous sample that had only received the routine treatment. The main hypothesis raises the existence of some specific profiles of patients with different healthcare needs since they make fewer suicide attempts during follow-up. The objectives of this study were 1) to analyse the sociodemographic and clinical characteristics of the TFP group and the routine treatment group; 2) to compare the differences between the routine treatment group and those who finished or did not finish the TFP in sociodemographic and clinical variables as well as the recurrence of suicidal behaviour; 3) to identify the patient profiles associated with the recurrence of suicidal behaviour and adherence to the programme; and 4) to analyse the differential efficacy according to patient profile.

2. Methods

2.1. Participants

Two patient samples were included in this study. In both cases, a follow-up was performed on all the people who were treated for SA in the Psychiatric Emergency Services (Complejo Hospitalario de Navarra & Hospital Reina Sofía de Tudela). SA was defined as all self-inflicted behaviour, potentially harmful, with a nonfatal result, for which there was evidence, explicit or implicit, of intent to die (O'Carroll et al., 1996). The inclusion criteria were being older than 18 years, admitted for a psychiatric emergency, and signing informed consent. The exclusion criteria were not agreeing to participate, being unable to answer, having difficulty with the language, or suffering from intellectual disability.

The first sample, which received the routine treatment, included patients treated between January and October 2015 (n =207). Three specific studies have been published on this sample. In the first one, the differences between patients treated in a hospital emergency room for a SA vs. other psychiatric care were assessed (Goñi-Sarries et al., 2018). In the second, the evolution of new attempts at six months was assessed (Azcarate-Jimenez et al., 2019). In the last one, the evolution at two years was assessed (Lopez-Goni et al., 2018). In this study, the evolution of new attempts in the first year was calculated. The second sample included 203 patients treated during 2018 who, in addition to the routine treatment, were included in a TFP.

2.2. Instruments

Sociodemographic variables and clinical variables were collected, and a psychiatric evaluation was performed. The sociodemographic variables were age, sex, marital status, place of birth, employment situation, living arrangement, and having children. The clinical variables were prior SA number, history of suicide in a first-degree relative, history of mental disorder with treatment for mental health, follow-up in mental health, psychopharmacological treatment, ICD-10 diagnosis, social/family support, method used in the SA, lethality of the SA, attitude towards the attempt, concomitant consumption of toxic substances before the SA, and hospital admission after the SA. Follow-up variables: At one year, continuing with mental health treatment, re-attempts, and completed suicide.

2.3. Design

Multicentre, open, ex post facto, pre/post, one-year prospective study of two groups in which a sample from a previous cohort served as a comparison.

2.4. Treatment

The two samples of this study received clinical follow-up at a mental health service as routine treatment. The second sample also received a TFP. This consisted of six calls (the day after emergency care, at 15 days, and at 2, 4, 8, and 12 months after the SA) that were made by a mental health nurse. The objectives of the first call were as follows: introduce each other, explain the programme, re-evaluate the risk of suicide, reinforce the therapeutic plan indicated in the emergency room, explore possible life stressors, and schedule, if necessary, a review with a referring professional in less than 10 days.

In later follow-up calls, we sought to reinforce therapeutic adherence or facilitate the return to treatment if treatment had been voluntarily ceased, as well as re-evaluate the risk of suicide or identify significant changes in the elapsed period. In cases where the nurse detected a crisis situation, she directly coordinated a visit with the emergency department and/or rescheduled an earlier appointment with the reference professional (psychiatrist or clinical psychologist).

2.5. Procedure

The Clinical Research Ethics Committee (Health Department of Govern of Navarre) authorized this research (Project No. 69/2019).

The evaluations were performed by psychiatric specialists and resident psychiatrists in the context of the psychiatric emergency services of the two general hospitals of the community. The interviews were conducted after stabilizing, if necessary, the clinical situation of the patient. First, the study protocol was explained to them, and after they signed the informed consent form, the interview began. This was performed before discharge from the emergency room or after having spent enough time in emergency observation that the physical and mental situation allowed it. The patients who made the most lethal SAs were recruited after consultation with psychiatry or during admission to the psychiatric hospitalization unit. One year after the initial evaluation, a member of the research team reviewed each of the patients' computerised clinical histories and collected the variables included in the follow-up.

2.6. Data analysis

Descriptive analyses were performed for all variables. In the comparisons between groups, the χ^2 test, Student's t-test, or analysis of variance was performed according to the nature of the variables analysed and the number of groups in the comparison. $p < .05$ was considered significant. For the identification of the different patient subsamples, the chi-squared automatic interaction detector (CHAID) analysis was used. This technique evaluates the discriminant capacity of a nominal variable (in this case, the presence or absence of SA in the follow-up) by means of the χ^2 test significance. Specifically, two CHAID analyses were performed. The first included the specific sample that received the TFP. In this case, and given the purpose of the study, the variable of having finished the TFP was included in the first level. The second CHAID analysis was performed on all patients included in the study. In this second analysis, the variable of having finished the TFP or undergoing routine treatment was included in the first level. The model grouped the routine treatment patients with those who had not finished the TFP. Next, the different subsamples or nodes that emerged in the analysed variables were characterized. All statistical analyses were performed with the SPSS statistical package (vs. 25.0).

3. Results

3.1. Sociodemographic and clinical characteristics of the samples

Table 1 shows sociodemographic and clinical characteristics of the samples. Patients treated between January and October 2015 (routine treatment; $n = 207$) were in a greater proportion male, were older, born in Spain, had more mental health diagnoses, presented with a greater lethality of attempt, more non-fatal outcome regret, had a greater number of prior attempts and a lower proportion of toxic substance use than the patients treated in 2018 (TFP; $n = 203$). In the rest of variables, both groups were very similar.

3.2. Evaluation of the telephone follow-up programme

Table 2 shows the comparison between the routine treatment group and the TFP group, differentiating between those who finished it and those who did not. A total of 53.2% of patients finished the TFP ($n = 108$). The patients who finished the TFP were more likely to be Spanish, to have a history of mental disorder and mental health treatment, to have had psychopharmacological treatment, to have social/family support, to have attempted suicide that was of intermediate/high lethality, and to have been admitted after the SA. Fifty percent of those who did not finish the TFP had consumed a toxic substance before the SA and to have had no clinical diagnosis. The routine treatment group had a higher percentage of patients who regretted not having died in the attempt.

3.3. Re-attempts and completed suicides at follow-up

In the routine treatment group, 20.3% ($n = 42$) of patients re-attempted at least once during follow-up, and 1.93% ($n = 4$) died by suicide. In the TFP group, 23.6% ($n = 48$) re-attempted at least once at follow-up, and one person died (0.5%). In turn, 20 patients who did not finish the TFP (21.1%) and 28 who did (25.9%) re-attempt at least once. No statistically significant differences were found between the three groups regarding follow-up re-attempts ($\chi^2 = 1.4$; df = 2; $p = .503$).

3.4. Characterization of patient subsamples based on the presence of any re-attempt and finishing or not finishing the TFP

In the CHAID analysis, 12 nodes or subsamples of patients were identified from the presence of at least one re-attempt in the follow-up and finishing or not finishing the TFP. The re-attempt rates of these subsamples ranged from 0% (node 9) to 57.1% (node 12; Fig. 1).

The subsample with the highest percentage of re-attempts (node 12) was men who did not finish the TFP who had a prior SA (8/14 = 57.1%) compared to men without a prior SA (15.8%; $\chi^2 = 6.20$; df = 1; $p = 0.013$). However, at node 9, no one re-attempted. In this analysis, those patients ($n = 18$) who were admitted, finished the TFP, and had no prior SA did not relapse in the follow-up ($n = 0$) compared to those who had finished the TFP after having been admitted but with a prior SA ($n = 4$; 25%; $\chi^2 = 5.1$; df = 1; $p = 0.024$).

Table 1
Sociodemographic and clinical characteristics of the sample.

	Total ($N = 410$)		Routine treatment ($n = 207$)		Telephone follow-up programme ($n = 203$)		χ^2 (*df*)	*p*	*Phi*
	N	%	*n*	%	*n*	%			
Sex									
Male	149	36.3	85	41.1	64	31.5	4.0 (1)	.045	.10
Female	261	63.7	122	58.9	139	68.5			
Place of birth									
Spain	320	78.0	177	85.5	143	70.4	13.6 (1)	<.001	.18
Other	90	22.0	30	14.5	60	29.6			
Employment									
Active (working, studying...)	213	52.0	111	53.6	102	50.2	0.5 (1)	.494	.03
Other	197	48.0	96	46.4	101	49.8			
Living arrangements									
Alone	58	14.1	35	16.9	23	11.3	2.6 (1)	.105	.08
Other	352	85.9	172	83.1	180	88.7			
Children	225	54.9	114	55.1	111	54.7	0.0 (1)	.936	.00
Prior attempt	194	47.3	94	45.4	100	49.3	0.6 (1)	.435	.04
Family history of suicide	54	13.2	27	13.0	27	13.3	0.0 (1)	.939	.00
History of mental disorder	319	77.8	161	77.8	158	77.8	0.0 (1)	.989	.00
Current diagnosis									
None	132	32.3	55	26.6	77	38.1	6.4 (2)	.041	.12
Affective disorders	83	20.3	44	21.3	39	19.3			
Other disorders	194	47.4	108	52.2	86	42.6			
At the time of care									
In follow-up for mental health	242	59.0	116	56.0	126	62.1	1.5 (1)	.214	.06
Psychopharmacological treatment	333	81.2	162	78.3	171	84.2	2.4 (1)	.121	.08
Social/family support	360	87.8	174	84.1	186	91.6	5.5 (1)	.019	.12
Admitted after attempted suicide	103	25.1	54	26.1	49	24.1	0.21 (1)	.649	.02
Method used in attempt									
Drug intoxication	310	75.6	160	77.3	150	73.9	0.6 (1)	.422	.04
Other	100	24.4	47	22.7	53	26.1			
Lethality of attempt									
Very low/low	281	68.5	131	63.3	150	73.9	5.4 (1)	.021	.11
Intermediate/high	129	31.5	76	36.7	53	26.1			
Attitude towards attempt									
Repentance	318	77.6	149	72.0	169	83.3	7.5 (1)	.006	.14
Regret outcome was not fatal	92	22.4	58	28.0	34	16.7			
Consumption of toxic substance	162	39.5	70	33.8	92	45.3	5.7 (1)	.017	.12
	M	***SD***	***M***	***SD***	***M***	***SD***	***t (df)***	***p***	***d***
Age	43.2	14.4	44.6	14.3	41.7	14.3	2.1 (408)	.039	0.20
Number of prior attempts	2.4	2.5	3.0	3.3	1.7	0.9	3.9 (192)	<.001	0.52

Table 2
Comparison between the routine treatment group and those who finished and did not finish the telephone follow-up programme.

	Routine treatment (n = 207)		Telephone follow-up programme (n = 203)				χ^2 (df)	p	Phi
			Did not finish (n = 95)		Finished (n = 108)				
	N	%	*n*	%	*n*	%			
Sex									
Male	85	41.1	33	34.7	31	28.7	4.8 (2)	.090	.11
Female	122	58.9	62	65.3	77	71.3			
Place of birth									
Spain	177	85.5	53	55.8	90	83.3	36.0 (2)	<.001	.30
Other	30	14.5	42	44.2	18	16.7			
Employment									
Active (working, studying...)	111	53.6	47	49.5	55	50.9	0.5 (2)	.775	.03
Other	96	46.4	48	50.5	53	49.1			
Living arrangements									
Alone	35	16.9	10	10.5	13	12.0	2.7 (2)	.257	.08
Other	172	83.1	85	89.5	95	88.0			
Children	114	55.1	47	49.5	64	59.3	2.0 (2)	.375	.07
Prior attempt	94	45.4	46	48.4	54	50.0	0.7 (2)	.719	.04
Family history of suicide	27	13.0	8	8.4	19	17.6	3.7 (2)	.155	.09
History of mental disorder	161	77.8	61	64.2	97	89.8	19.2 (2)	<.001	.22
Current diagnosis									
None	55	26.6	43	45.7	34	31.5	17.9 (4)	.001	.21
Affective disorders	44	21.3	9	9.6	30	27.8			
Other disorders	108	52.2	42	44.7	44	40.7			
At the time of care									
In follow-up for mental health	116	56.0	51	53.7	75	69.4	6.7 (2)	.035	.13
Psychopharmacological treatment	162	78.3	74	77.9	97	89.8	7.2 (2)	.029	.13
Social/family support	174	84.1	84	88.4	102	94.4	7.2 (2)	.027	.13
Admitted after attempted suicide	54	26.1	15	15.8	34	31.5	6.8 (2)	.033	.13
Method used in attempt									
Drug intoxication	160	77.3	71	74.7	79	73.1	0.7 (2)	.700	.04
Other	47	22.7	24	25.3	29	26.9			
Lethality of attempt									
Very low/low	131	63.3	80	84.2	70	64.8	14.2 (2)	.001	.19
Intermediate/high	76	36.7	15	15.8	38	35.2			
Attitude towards attempt									
Repentance	149	72.0	81	85.3	88	81.5	7.9 (2)	.019	.14
Regret outcome was not fatal	58	28.0	14	14.7	20	18.5			
Consumption of toxic substance before attempt	70	33.8	48	50.5	44	40.7	7.7 (2)	.021	.14
Continuing treatment in mental health at one year	na	-	40	42.6	89	82.4	34.6	<.001	.414
	M	***SD***	***M***	***SD***	***M***	***SD***	***F (df)***	***p***	η^2
Age	44.6	14.3	37.4	13.5	45.5	14.0	10.7 (2)	<.001	.05
Number of prior attempts	3.1	3.3	1.6	0.9	1.8	1.0	7.7 (2)	.001	.07

na = not available

3.5. Characterization of patient subsamples based on the presence of any re-attempt, belonging to the routine treatment group or the TFP group, and finishing the TFP or not

Fig. 2 shows the subsamples of patients identified by the CHAID model based on the presence or absence of re-attempts during follow-up, belonging to the routine treatment group or TFP group, and having finished or not finished the TFP. In this analysis, the model maintained the same nodes among those who finished the TFP and grouped those who did not finish it with the routine treatment group. Among subsamples, three final nodes were identified (5, 11, and 12), with 4.5%, 17.2%, and 32.5% re-attempting in the follow-up.

3.6. Comparison between the identified subsamples

Table 3 shows the characteristics of each of the identified nodes. The most populous were nodes 12 (n = 120) and 11 (n = 116), and the least are nodes 10 (n = 16) and 9 (n = 18). The lowest relapse rates were presented by nodes 9 (no re-attempt) and 5 (4.5%). There are some differences between node 9 (formed by patients who finished the TFP) and node 5. Node 9 had a greater proportion of people born in Spain, a higher average age, a greater proportion without prior SA, and a greater proportion with a family history of SA. A total of 94.4% of node 9 had a history of mental disorder, a greater presence than node 5 of affective disorders, were more likely to be in mental health follow-up and to be under psychopharmacological treatment, and presented a greater lethality in the SA, all of them being admitted after it.

The nodes with the highest re-attempt rates were nodes 8, formed by patients who finished TFP (44.1%), and node 12 (32.5%). All members of node 12 had a prior SA. In comparison with node 8, it had a higher mean prior SA number, a greater proportion admitted, a more serious lethality of the attempt, more diagnoses other than affective disorders, and a higher percentage in mental health follow-up.

4. Discussion

The main finding of this study is that it corroborates the hypothesis of the existence of specific profiles of patients with different healthcare needs since differences in the repetition of suicide attempts were found among patients who have followed the routine treatment and finished a TFP vs. those who did not finish it. The variables that best explained the results and discriminated between the specific profiles of patients who benefited from the intervention were a history of prior SA, the degree of lethality of the SA, and the presence of a psychiatric diagnosis.

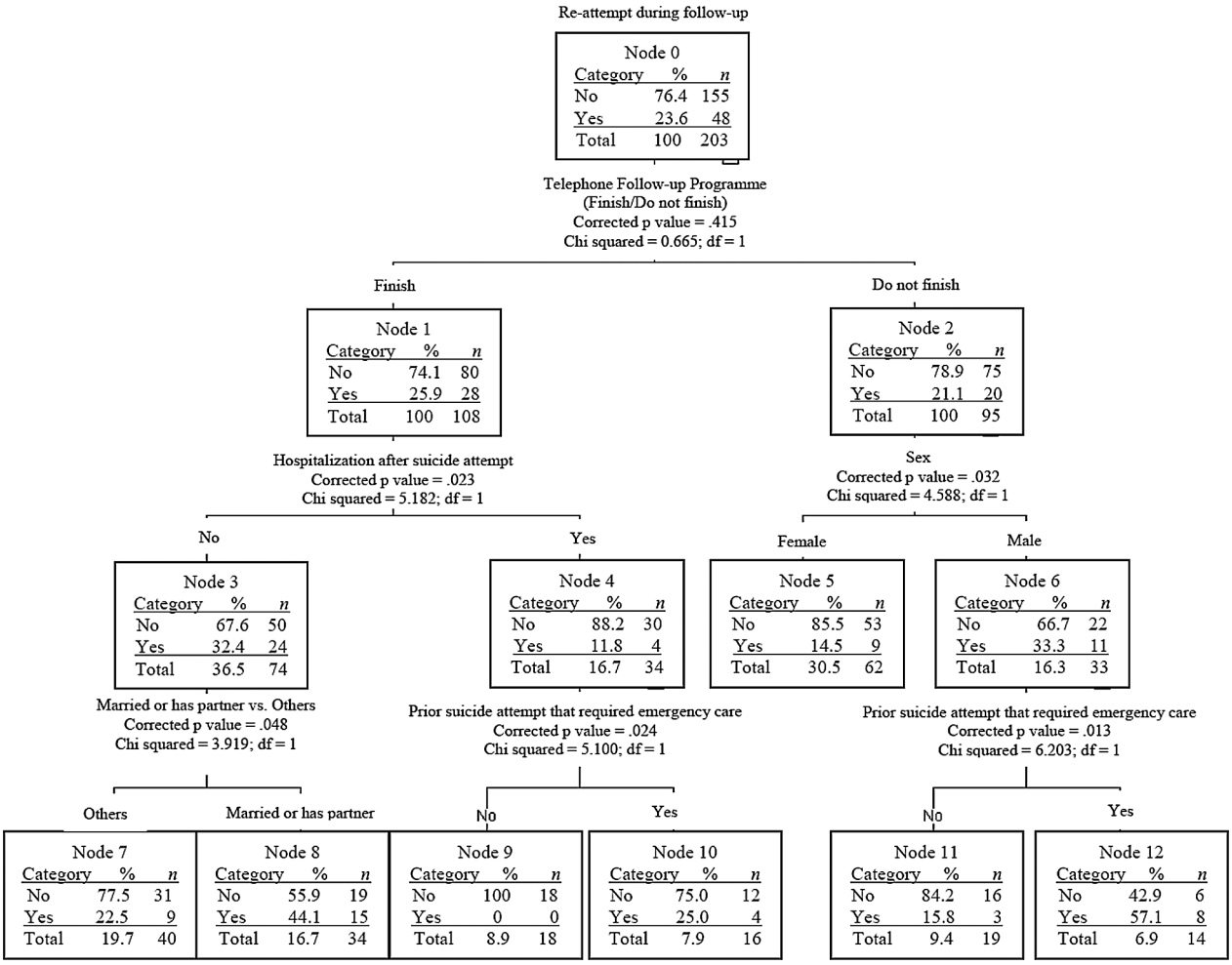

Fig. 1. Patient profiles and presence of any re-attempt during follow-up among those who finished and did not finish the telephone follow-up programme.

Specifically, one of the most significant results was that both the non-repetition of suicidal behaviour and the highest relapse rates were present in those who followed routine treatment and also finished the TFP.

Previous research recommended that TFP be applied to patients who had repeated SAs several times and not in first-time patients (Duhem et al., 2018; Vaiva et al., 2006). Our work contradicts the recommendation because our model identified a profile of patients with an index attempt who finished the TFP and did not re-attempt in the follow-up year. These patients were hospitalized and therefore, as Plancke notes (Plancke et al., 2020), presented a greater severity in the SA. In addition to having a more serious patient profile, they were middle-aged, used a greater proportion of other types of violent methods, and suffered mainly from affective disorders. All these variables characterize the subsample of patients who finished and benefited from the TFP. This profile is very different from the group that did not receive follow-up, the routine treatment group, who were younger, were not in mental health treatment, and therefore did not have a clinical diagnosis at the time of the suicide attempt and had less history of mental disorder. This profile indicates less psychopathological severity and is in line with previous studies that have indicated a diagnosed mental disorder (Runeson et al., 2016) and being in psychiatric treatment (Azcarate-Jimenez et al., 2019; Fedyszyn et al., 2016) as risk factors for repeated attempts or death by suicide. However, being younger (Nock et al., 2008) and using methods other than drug intoxication (Runeson et al., 2016) are also powerful predictors of suicidal behaviour.

In contrast, in the subsamples presenting a high recurrence rate of suicidal behaviour, regardless of the treatment they received, it was found that prior attempts were not a predictive or sensitive factor since they appeared between 47 and 100% of the subsamples (Arias et al., 2016; Goñi-Sarriés et al., 2018), nor did they predispose to greater effectiveness of specific or routine programmes (Messiah et al., 2019). This confirms the greater vulnerability to repetition among those who make more than one prior attempt (Mendez-Bustos et al., 2013) and supports the indication of a longer-term therapeutic follow-up for them (Lopez-Goni et al., 2018).

From a global perspective, no significant differences were found in terms of the decrease in repetition of suicidal behaviour in the year of follow-up between those who participated in the TFP and the comparison group. (Bertolote et al., 2010; Cedereke et al., 2002; Gabilondo et al., 2020; Milner et al., 2015; Mousavi et al., 2014), unlike other results that show reductions between 5 and 12% (Cebrià et al., 2013; Fleischmann et al., 2008; Miller et al., 2017; Plancke et al., 2020). These differences could be due to differences in follow-up duration, which has varied between 6 (Cedereke et al., 2002; Gabilondo et al., 2020) and 12 months (Bertolote et al., 2010; Cebrià et al., 2013), the methods used in the different programmes and protocols (some also include written messages) (Plancke et al., 2020), differences in the number of calls, or different inclusion criteria of patients in this type of brief-contact intervention. Replicating this type of protocol would facilitate more consistent results (Turecki et al., 2019).

Finally, the TFP achieved moderate adherence, although this type of intervention is well-rated and accepted by patients, since 50-60% of those who participate finish it in its entirety (Cebrià et al., 2013; Gabilondo et al., 2020; Miller et al., 2017; Vaiva et al., 2006), meaning they

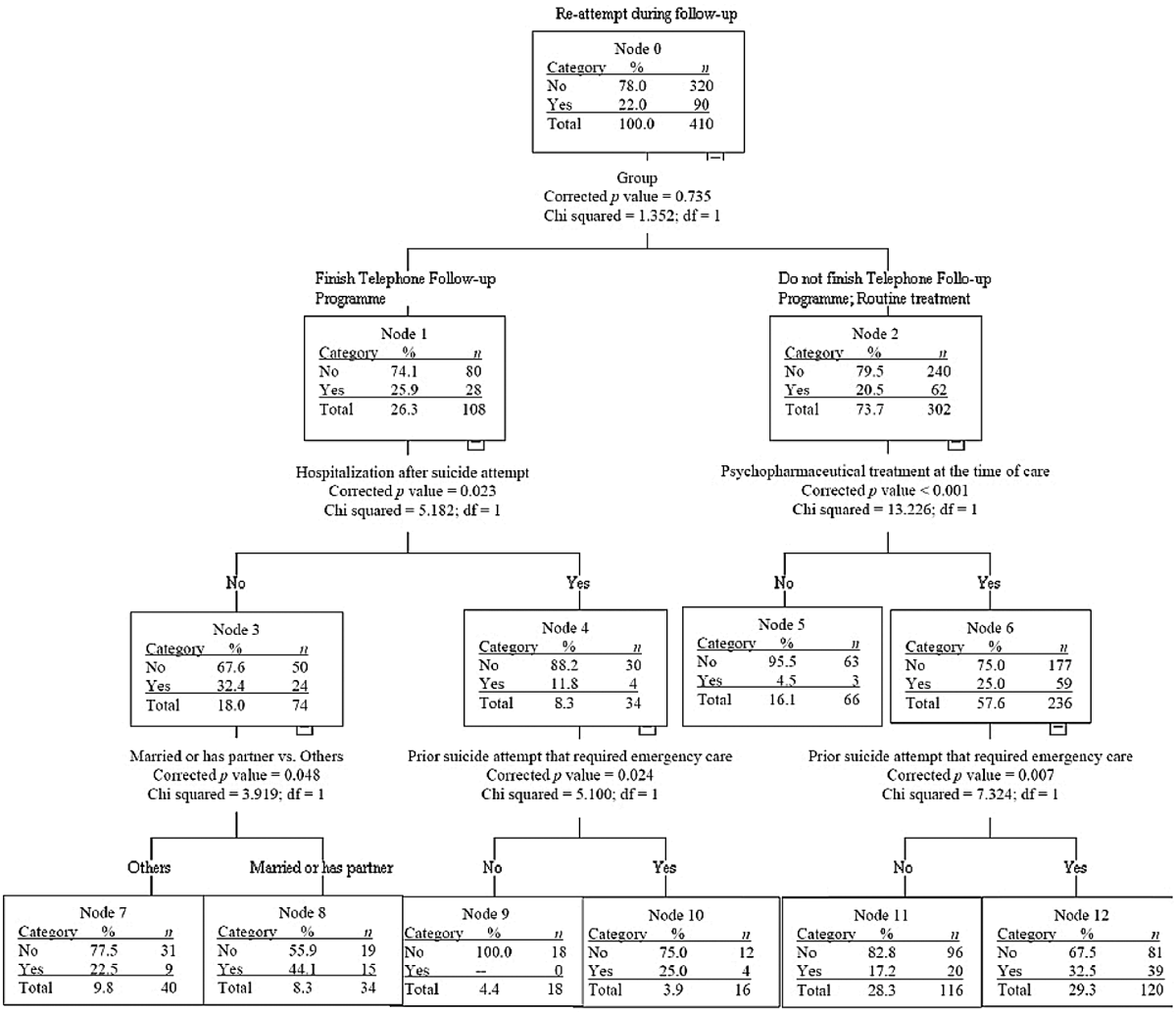

Fig. 2. Patient profiles and presence of any re-attempt during follow-up among those who finished and did not finish the telephone follow-up programme and the routine treatment group.

answer half of the calls scheduled in the protocol. Although the rates could be improved, the important thing is that in this programme, the calls have several objectives: the patient will be treated at their mental health centre within 10 days after the emergency, and adherence to the system is encouraged. In each call, the risk of suicide is re-evaluated, possible psychosocial stressors are monitored, and the individualized therapeutic plan is supervised. Therefore, telephone follow-up provides clinical and risk assessment of the patient as case management (Fernández-Artamendi et al., 2019), but it is also true that in this type of structured and closed programme, more proactive follow-up could be incorporated depending on the situation of the patient, or even extended over time (Cebria et al., 2015), and in particular, better-suited criteria could be incorporated since the TFP benefitted patients with a more severe profile and did not help as much for those with prior attempts whose attempt lethality was low.

Innovating prevention and training in the management of suicidal behaviour is a therapeutic challenge. It is necessary to individualize the treatment based on the differential characteristics of the patients (Goñi-Sarriés and Zandio, 2017). In our study, the need to improve care for patients with an increased risk of relapse (12-30%) who, to a great extent, did not adhere to therapeutic support is evident. The incorporation of individual safety plans in therapeutic management could improve the results (Stanley et al., 2018).

This study presents some limitations that may affect the generalization of the conclusions. The comparison group belonged to a previous cohort and the comparisons between groups have shown significant differences between groups in baseline in several variables. However, except for the time period, the selection criteria of the cases and the routine treatment received were the same, which allowed both groups to be compared. Another limitation was that those under 18 years of age were excluded since it was considered that the brief-contact intervention for this age group would likely have other characteristics that were not considered in this project. On the other hand, the study was conducted in hospital emergency departments and therefore included those who received this type of care and excluded those who attempted suicide yet did not receive medical care. Finally, this study was conducted for one year in a specific community. It is necessary to replicate it in other communities with more patients.

In conclusion, this study did not find a significant reduction in the recurrence of suicidal behaviour through TFP. However, it has identified a profile of patients who could have benefited (those admitted for a severe index attempt and with more severe psychopathological symptoms) and another profile who did not (those with prior SA and low lethality).

Ethics and integrity policies

The Clinical Research Ethics Committee (Health Department of Govern of Navarre) authorized this research (project No. 69/2019). All the patients included in this study signed informed consent.

Table 3
Differential efficacy and characterization of patient subsamples.

	Finished the telephone follow-up programme ($N = 108$)								Routine treatment + did not finish the telephone follow-up programme ($N = 302$)								
Node	7 ($n = 40$)		8 ($n = 34$)		9 ($n = 18$)		10 ($n = 16$)		5 ($n = 66$)		11 ($n = 116$)		12 ($n = 120$)		χ^2 (*df*)	*p*	*Phi*
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%			
Re-attempts during follow-up	9	22.5	15	44.1	0	-	4	25.0	3	4.5	20	17.2	39	32.5	35.9 (6)	<.001	.296
Sex																	
Female	29	72.5	28	82.4	9	50.0	11	68.8	38	57.6	70	60.3	76	63.3	9.7 (6)	.136	.154
Place of birth																	
Spain (vs. foreign)	33	82.5	29	85.3	15	83.3	13	81.3	38	57.6	97	83.6	95	79.2	20.2 (6)	.003	.222
Employment																	
Active (working, studying…) vs. other	23	57.5	17	50.0	9	50.0	6	37.5	37	56.1	66	56.9	55	45.8	5.3 (6)	.507	.114
Living arrangement																	
Alone (vs. other)	7	17.5	0	-	2	11.1	4	25.0	2	3.0	22	19.0	21	17.5	17.7 (6)	.007	.208
Children (Yes)	17	42.5	26	76.5	8	44.4	13	81.3	25	37.9	62	53.4	74	61.7	24.2 (6)	<.001	.243
Prior attempt	22	55.0	16	47.1	0	-	16	100	20	30.3	0	-	120	100.0	280.4 (6)	<.001	.827
Family history of suicide	3	7.5	6	17.6	5	27.8	5	31.3	4	6.1	18	15.5	13	10.8	13.7 (6)	.033	.183
History of mental disorder	36	90.0	28	82.4	17	94.4	16	100	21	31.8	90	77.6	111	92.5	107.1 (6)	<.001	.511
Diagnosis																	
None	10	25.0	17	50.0	5	27.8	2	12.5	35	53.0	30	26.1	33	27.5			
Affective disorders	8	20.0	5	14.7	7	38.9	10	62.5	8	12.1	26	22.6	19	15.8	47.0 (12)	<.001	.339
Other disorders	22	55.0	12	35.3	6	33.3	4	25.0	23	34.8	59	51.3	68	56.7			
At the time of care																	
In follow-up for mental health	30	75.0	18	52.9	13	72.2	14	87.5	6	9.1	74	63.8	87	72.5	89.5 (6)	<.001	.467
Psychopharmacological treatment	34	85.0	30	88.2	18	100	15	93.8	0	-	116	100	120	100	347.3 (6)	<.001	.920
Social/family support	37	92.5	33	97.1	17	94.4	15	93.8	54	81.8	97	83.6	107	89.2	9.1 (6)	.167	.149
Admitted after attempted suicide	0	-	0	-	18	100	16	100	8	12.1	29	25.0	32	26.7	132.2 (6)	<.001	.568
Method used in attempt																	
Drug intoxication (vs. others)	29	72.5	29	85.3	11	61.1	10	62.5	46	69.7	84	72.4	101	84.2	12.1 (6)	.059	.172
Lethality of attempt																	
Intermediate/high (vs. very low/low)	5	12.5	3	8.8	14	77.8	16	100	20	30.3	34	29.3	37	30.8	67.8 (6)	<.001	.407
Attitude towards attempts																	
Repentance (vs. regret not fatal)	34	85.0	27	79.4	16	88.9	11	68.8	49	74.2	93	80.2	88	73.3	5.5 (6)	.483	.116
Consumption of toxic substance before attempt	19	47.5	13	38.2	7	38.9	5	31.3	17	25.8	47	40.5	54	45.0	8.3 (6)	.214	.143
	M	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***F (df)***	***p***	η^2
Age	39.7	17.9	46.4	7.9	51.2	15.2	51.5	17.8	40.1	17.9	43.7	14.1	42.3	12.4	3.2 (6)	.004	.046
Number of prior attempts	1.9	1.0	1.4	0.6	-	-	2.1	1.1	1.3	0.7	-	-	2.8	3.0	2.6 (4)	.038	.052

Conflict of interest

The authors do not have any financial interests that may be interpreted as influencing the research.

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